

VIP-NET-M28a Layer-3 Modular Managed 1G/10G Network Switch with 4 Slots (up to 28 Ports)



Key Features

- Layer-3 modular managed redundant ring Ethernet switch
- 4 slots (first 3 slots – 1G, 4th slot – up to 4 x 1G/10G)
- Supports O-Ring (recovery time < 30ms over 250 units of connection) and MSTP (RSTP/STP compatible) for Ethernet Redundancy
- 18Gbps bandwidth support
- O-Chain allow multiple redundant network rings

Physical Ports

SLOT NUMBER 4 (up to 3 slots for 8x1G ports and 1 slot for 4x10G port)

Technical Specifications

ETHERNET STANDARDS

IEEE 802.3 for 10Base-T
 IEEE 802.3u for 100Base-TX and 100Base-FX
 IEEE 802.3ab for 1000Base-T
 IEEE 802.z for 1000Base-X
 IEEE 802.3ae for 10Gigabit Ethernet
 IEEE 802.3x for Flow control
 IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
 IEEE 802.1p for COS (Class of Service)
 IEEE 802.1Q for VLAN Tagging
 IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)
 IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)
 IEEE 802.1x for Authentication
 IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)

MAC TABLE 32K

PRIORITY QUEUES 8

PROCESSING Store-and-Forward

SWITCH PROPERTIES

Switching latency: 7 us
 Switching bandwidth: 128Gbps
 Max. Number of Available VLANs: 4095
 VLAN ID Range: 1 to 4094
 IGMP multicast groups: 128 for each VLAN
 Port rate limiting: User Define

JUMBO FRAME Up to 10K Bytes

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SECURITY FEATURES	<ul style="list-style-type: none"> Device Binding security feature Enable/disable ports, MAC based port security Port based network access control (802.1x) MAC-based authentication MAC address limit VLAN (802.1Q) to segregate and secure network traffic Radius centralized password management SNMPv3 encrypted authentication and access security Https / SSH enhance network security Web and CLI authentication and authorization IP source guard
SOFTWARE FEATURES	<ul style="list-style-type: none"> Hardware routing, RIP and static routing IEEE 1588v2 clock synchronization IEEE 802.1D Bridge, auto MAC address learning/aging and MAC address (static) Multiple Registration Protocol (MRP) MSTP (RSTP/STP compatible) Redundant Ring (O-Ring) with recovery time less than 30ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging IGMP v2/v3 Snooping IP-based bandwidth management Application-based QoS management DOS/DDOS auto prevention Port configuration, status, statistics, monitoring, security DHCP Server/Client DHCP Relay Modbus TCP SMTP Client SNTP Server
NETWORK REDUNDANCY	<ul style="list-style-type: none"> O-Ring O-Chain MSTP (RSTP/STP compatible)

LED Indicators

POWER INDICATOR (PWR)	Green: Indicates that the system ready. The LED is blinking when the system is upgrading firmware
POWER INDICATOR (PWR1 / PWR2)	Green: Power LED x 2
RING MASTER INDICATOR (R.M.)	Green: Indicates that the system is operating in O-Ring Master mode
O-RING INDICATOR (RING)	Green: Indicates that the system operating in O-Ring mode Green Blinking: Indicates that the Ring is broken.
FAULT INDICATOR (FAULT)	Amber: Indicate unexpected event occurred
RESET TO DEFAULT RUNNING INDICATOR (DEF)	Green: System resets to default configuration

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SUPERVISOR LOGIN INDICATOR (RMT) Green: System is accessed remotely

SMART LED DISPLAY SYSTEM Link/Act(LK/ACT) / Speed(SPD) / Duplex(FDX) / Remote (RMT) green LED indicator x 4 Mode select Button (MODE) : Link/Act(LK/ACT) / Speed(SPD) / Duplex(FDX) / Remote (RMT) mode select button Port 1 ~ 28 Link/Act(LK/ACT) LED show : Green x 28

Fault Contact

RELAY Relay output to carry capacity of 1A at 24VDC

Power

REDUNDANT POWER INPUT MODULAR	Dual 24/48VDC (24~72VDC) power inputs at terminal block (Note 2)	Dual 100~240VAC / 100~370VDC power inputs at terminal block
POWER CONSUMPTION (TYP.)	46Watts max.	43.5Watts max.
OVERLOAD CURRENT PROTECTION	Present	

Physical Characteristics

ENCLOSURE	19 inches rack mountable
DIMENSIONS (W X D X H)	440 (W) x 325 (D) x 44 (H) mm (17.32x12.8x1.73 inches)
WEIGHT (G)	6450 g 6600 g

MTBF (mean time between failures)

TIME	246,537hrs (Note 1)	246,537hrs (Note 1)
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Environmental

STORAGE TEMPERATURE	-40 to 85°C (-40 to 185°F)	
OPERATING TEMPERATURE	24VDC~36VDC 10G SFP+ module absent: -40 to 75°C	
	24VDC~36VDC 10G SFP+ module used: -20 to 50 °C	10G SFP+ module absent: -40 to 85°C 10G SFP+ module used: -20 to 60 °C
	36VDC~72VDC 10G SFP+ module absent: -40 to 85°C	
	36VDC~72VDC 10G SFP+ module used: -20 to 60 °C	

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OPERATING HUMIDITY 5% to 95% Non-condensing

Regulatory Approvals

POWER AUTOMATION	IEC 61850-3, IEEE 1613
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8, IEC61000-4-11
EMC	EN50121-4 (EN50121-1)
SAFETY	UL 60950-1
TRANSPORT	NEMA TS1&TS2